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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MARCHESCHI, MICHAEL A	
ART UNIT	**PAPER NUMBER**
1755	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/433,202	REITZ ET AL.	
	Examiner	Art Unit	
	Michael A. Marcheschi	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *remand from BPAI dated 9/8/05*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28 and 31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28 and 31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The finality of the rejections of the last office action are withdrawn in response to the remand from the Board of Patent Appeals and Interferences with a mailing date of 9/8/05. The decision (from the Board of Patent Appeals and Interferences and CAFC) made in application 9/136,483 are made of record and have been considered as required by the remand by the Board of Patent Appeals and Interferences.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9, 14 and 18-28 are rejected under 35 U.S.C. 103(a) as being obvious over Rostoker et al (U.S. Patent 5,389,194) in view of Farkas et al..

The Rostoker et al. reference teaches a method of polishing a surface having a plurality of compositions thereon (see figures) using a polishing composition composed of particles dispersed in an aqueous solution. The taught particles are composed of alpha alumina or silica particles (reads on instant claims 3 and 4). The particles have a size (X value of 10-100) and a

distribution that is controlled to within a certain selected size (Y value which is "P" (10-50%) of "X"). Example 3 teach that the particles have an average particle size of 10 nm (the X value) and a distribution where all the particles have a size within 10% of the average particles size (the X value). This means that all the particles are within the range of 10% of the average particle size and 110% of the average particles size. Accordingly, there are no particles have a size greater than 3 times the average particle size. This is because 10% (P value) of 10 nm is 1 nm and 110% of 10 nm is 11 nm, thus the size distribution can be 10 nm $\pm$1 nm or a distribution of between 9-11 nm (reads on the distribution of instant claims 1, 23, 24 and 28). Similarly, assuming X to be 10 nm and P to be 50% (values clearly disclosed by reference), then Y would be 50% of 10 nm or 5 nm, thus the distribution can be 10 nm $\pm$5 nm, thus there are no particles have a size greater than 3 times the average particle size. The composition is implied as having any pH but specifically pH values of between 3-3.5 (reads on instant claims 5 and 6) or a pH between 10.5-11 (reads on instant claims 7-8). With respect to the primary and secondary particle limitation, it is the examiners position that absent evidence to the contrary, the particle defined in the reference reads on a primary particle. As to the secondary particle size, since this size can be the same as the primary size, the secondary particle of the reference can be broadly interpreted as the primary particle, thus no distinction is seen to exist. In addition, during processing, it is the examiners position that some agglomeration can take place, thus reading on a secondary particle.

Farkas et al. teaches in abstract and column 6, lines 14-20 that in polishing compositions the solvent can be water, an alcohol or a mixture thereof and that the abrasive is generally 1-12 percent of the slurry.

The primary reference is silent with respect to the amount of particles in the dispersion, however, it is the examiners position that that one skilled in the art would have routinely known the amount of abrasive to be included in the polishing slurry to produce the most optimum slurry, said amount being a conventional amount, as clearly shown by Farkas et al.

With respect to claim 9, this claim is obvious over the primary reference because according to the reference, it is suggested that the pH can be adjusted at will and this broadly implies that the composition can have any pH, such as the pH according to instant claim.

With respect to the removal rate of claim 27, since the composition is the same, it is the examiners position that this characteristic is expected because the same composition is expected to yield the same results absence evidence to the contrary.

Claims 10-13 and 15-17 are rejected under 35 U.S.C. 103(a) as being obvious over Rostoker et al (U.S. Patent 5,389,194) in view of Farkas et al. (730) and Sachan et al. (933).

Sachan et al. teach in sections [0019]-[0020] that oxidizer and surfactants are conventional additives to be incorporated into polishing compositions for adjustment of polishing properties, as in the case of oxidizers and prevent (minimize) agglomeration , as in the case of surfactants.

With respect to claims 10-13 the addition of a surfactant and oxidizer would have been obvious because Sachan et al. teaches that these additive are conventionally added to polishing composition for various reasons and the use of any known polishing additive would have been well within the scope of the skilled artisan in order to vary the polishing characteristics, as well as, minimize agglomeration which could be detrimental to the performance of the polishing

composition (i.e. larger sizes (agglomerates) will maximize scratching). The use of the claimed specific trimethyl ammonium bromide, as the surfactant is obvious because it is the examiners position that the use of the dodecyl form instead of the cetyl form is clearly within the scope of the skilled artisan. With respect to claims 15-17, Farkas et al. teaches that the use of an alcohol or alcohol/water medium is conventional in polishing compositions and is the examiners position that one skilled in the art would have routinely known that either water, alcohol or an alcohol/water carrier can be used as the dispersing medium to form polishing compositions.

Claim 31 is rejected under 35 U.S.C. 102(b) as being anticipated by Rostoker et al (U.S. Patent 5,389,194).

The reference teaches polishing a surface comprising a metal layer with a polishing composition which comprises the claimed collection of particles (see specific reasoning above). With respect to the removal rate of claim 31, since the composition is the same, it is the examiners position that this characteristic is inherent absent evidence to the contrary.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9, 14, 15 and 18-25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 9-15 of copending Application No. 09/136,483. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the copending claims would render obvious the instant claims.

The copending claims suggest a collection of particles, wherein said particles can have a size distribution within the claimed range, thus meeting instant claims 1-4, 14, 15 and 18-25. With respect to instant claims 5-9, although the reference is silent as to the pH, the pH is dependent on the composition and since the composition is the same (aqueous or non aqueous dispersion of alumina particles), it is the examiners position that the pH is expected in the copending claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 10-13 and 16-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 9-15 of copending Application No. 09/136,483 in view Farkas et al. (730) and Sachan et al. (933).

With respect to claims 10-13 the addition of a surfactant and oxidizer would have been obvious because Sachan et al. teaches that these additive are conventionally added to polishing

composition for various reasons and the use of any known polishing additive would have been well within the scope of the skilled artisan in order to vary the polishing characteristics, as well as, minimize agglomeration which could be detrimental to the performance of the polishing composition (i.e. larger sizes (agglomerates) will maximize scratching). The use of the claimed specific trimethyl ammonium bromide, as the surfactant is obvious because it is the examiners position that the use of the dodecyl form instead of the cetyl form is clearly within the scope of the skilled artisan. With respect to claims 16-17, Farkas et al. teaches that the use of an alcohol or alcohol/water medium is conventional in polishing compositions and is the examiners position that one skilled in the art would have routinely known that an alcohol or an alcohol/water carrier can be used as the dispersing medium to form polishing compositions.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-9, 14, 15 and 18-25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 15, 23, 24 and 26-30 of copending Application No. 09/841,255 in view of Farkas et al.

The copending claims suggest a collection of particles, wherein said particles can have a size distribution within the claimed range, thus meeting instant claims 1-4, 14, 15 and 18-25. With respect to instant claims 5-9, although the reference is silent as to the pH, the pH is dependent on the composition and since the composition is the same (aqueous or non aqueous dispersion of titania or silica particles), it is the examiners position that the pH is expected in the copending claims. With respect to the concentration, it is the examiners position that that one

skilled in the art would have routinely known the amount of abrasive to be included in the polishing slurry to produce the most optimum slurry, said amount being a conventional amount, as clearly shown by Farkas et al.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 10-13 and 16-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 9-15 of copending Application No. 09/841,255 in view Farkas et al. (730) and Sachan et al. (933).

With respect to claims 10-13 the addition of a surfactant and oxidizer would have been obvious because Sachan et al. teaches that these additive are conventionally added to polishing composition for various reasons and the use of any known polishing additive would have been well within the scope of the skilled artisan in order to vary the polishing characteristics, as well as, minimize agglomeration which could be detrimental to the performance of the polishing composition (i.e. larger sizes (agglomerates) will maximize scratching). The use of the claimed specific trimethyl ammonium bromide, as the surfactant is obvious because it is the examiners position that the use of the dodecyl form instead of the cetyl form is clearly within the scope of the skilled artisan. With respect to claims 16-17, Farkas et al. teaches that the use of an alcohol or alcohol/water medium is conventional in polishing compositions and is the examiners position that one skilled in the art would have routinely known that an alcohol or an alcohol/water carrier can be used as the dispersing medium to form polishing compositions.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-9, 14, 15 and 18-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9-15 of Patent No. 6,726,990. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the copending claims would render obvious the instant claims.

The copending claims suggest a collection of particles, wherein said particles can have a size distribution within the claimed range, thus meeting instant claims 1-4, 14, 15 and 18-25. With respect to instant claims 5-9, although the reference is silent as to the pH, the pH is dependent on the composition and since the composition is the same (aqueous or non aqueous dispersion of silica particles), it is the examiners position that the pH is expected in the patented claims.

Claims 10-13 and 16-17 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9-15 of patent No. 6,726,990 in view Farkas et al. (730) and Sachan et al. (933).

With respect to claims 10-13 the addition of a surfactant and oxidizer would have been obvious because Sachan et al. teaches that these additive are conventionally added to polishing composition for various reasons and the use of any known polishing additive would have been well within the scope of the skilled artisan in order to vary the polishing characteristics, as well

as, minimize agglomeration which could be detrimental to the performance of the polishing composition (i.e. larger sizes (agglomerates) will maximize scratching). The use of the claimed specific trimethyl ammonium bromide, as the surfactant is obvious because it is the examiners position that the use of the dodecyl form instead of the cetyl form is clearly within the scope of the skilled artisan. With respect to claims 16-17, Farkas et al. teaches that the use of an alcohol or alcohol/water medium is conventional in polishing compositions and is the examiners position that one skilled in the art would have routinely known that an alcohol or an alcohol/water carrier can be used as the dispersing medium to form polishing compositions.

Claims 1-9, 14, 15 and 18-25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-17 of copending Application No. 11/046,610. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the copending claims would render obvious the instant claims.

The copending claims suggest a collection of particles, wherein said particles can have a size distribution within the claimed range, thus meeting instant claims 1-4, 14, 15 and 18-25. With respect to instant claims 5-9, although the reference is silent as to the pH, the pH is dependent on the composition and since the composition is the same (aqueous or non aqueous dispersion of alumina particles), it is the examiners position that the pH is expected in the copending claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 10-13 and 16-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-17 of copending Application No. 11/046,610 in view Farkas et al. (730) and Sachan et al. (933).

With respect to claims 10-13 the addition of a surfactant and oxidizer would have been obvious because Sachan et al. teaches that these additive are conventionally added to polishing composition for various reasons and the use of any known polishing additive would have been well within the scope of the skilled artisan in order to vary the polishing characteristics, as well as, minimize agglomeration which could be detrimental to the performance of the polishing composition (i.e. larger sizes (agglomerates) will maximize scratching). The use of the claimed specific trimethyl ammonium bromide, as the surfactant is obvious because it is the examiners position that the use of the dodecyl form instead of the cetyl form is clearly within the scope of the skilled artisan. With respect to claims 16-17, Farkas et al. teaches that the use of an alcohol or alcohol/water medium is conventional in polishing compositions and is the examiners position that one skilled in the art would have routinely known that an alcohol or an alcohol/water carrier can be used as the dispersing medium to form polishing compositions.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-3, 5-9, 14 and 18-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6, 8 and 10-11 of Patent No. 6,290,735. Although the conflicting claims are not identical, they are not patentably distinct

from each other because the reduction to practice of the copending claims would render obvious the instant claims.

The copending claims suggest a collection of particles, wherein said particles can have a size distribution within the claimed range, thus meeting instant claims 1-3, 14 and 18-25. With respect to instant claims 5-9, although the reference is silent as to the pH, the pH is dependent on the composition and since the composition is the same (aqueous or non aqueous dispersion of silica particles), it is the examiners position that the pH is expected in the patented claims.

Claims 10-13 and 15-17 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6, 8 and 10-11 of patent No. 6,290,735 in view Farkas et al. (730) and Sachan et al. (933).

With respect to claims 10-13 the addition of a surfactant and oxidizer would have been obvious because Sachan et al. teaches that these additive are conventionally added to polishing composition for various reasons and the use of any known polishing additive would have been well within the scope of the skilled artisan in order to vary the polishing characteristics, as well as, minimize agglomeration which could be detrimental to the performance of the polishing composition (i.e. larger sizes (agglomerates) will maximize scratching). The use of the claimed specific trimethyl ammonium bromide, as the surfactant is obvious because it is the examiners position that the use of the dodecyl form instead of the cetyl form is clearly within the scope of the skilled artisan. With respect to claims 15-17, Farkas et al. teaches that the use of an alcohol or alcohol/water medium is conventional in polishing compositions and is the examiners position

that one skilled in the art would have routinely known that an alcohol or an alcohol/water carrier can be used as the dispersing medium to form polishing compositions.

In view of the remand mailed 9/8/05, the examiner will comment on the declaration of by Professor Singh which bears the execution date of 12/10/01.

All of applicants other remarks have been addressed in the original Examiners answers dated 5/4/01 and 7/9/03 (mailing dates). The examiners remarks being incorporated herein by reference.

The declaration under 37 CFR 1.132 filed 21 December 2001 is insufficient to overcome the rejection of the claims based upon the Rostoker patent. The declaration criticizes one possible method of determining Q, as defined in the reference and there has been no showing of a preponderance of evidence that the Q value cannot be determined by the disclosed method. Since every patent is presumed valid (35 U.S.C. 282), and since that presumption includes the presumption of operability Metropolitan Eng. Co. v. Coe, 78 F.2d 199, 25 USPQ 216 (D.C. Cir. 1935), affidavits or declarations attacking the operability of a patent cited as a reference must rebut the presumption of operability by a preponderance of the evidence. In re Sasse, 629 F.2d 675, 207 USPQ 107 (CCPA 1980). Given the other teachings in the patent that Q is inversely proportional to Y, the fact the patent gives actual numerical values for Q and the teachings of the examples where the size distribution of the particles are clearly stated, the fact that the method for determining Q might be unclear to Dr. Singh and not found in the books cited by Dr. Singh does not detract from rest of the teachings of this patent nor does it show

the Q value cannot be determined by one of ordinary skill in the art. The declaration does not show that the claimed particles are different and unobvious over those of the reference and Dr. Singh's comments with respect to the Siegel patent are given no weight since he has not provided any evidence to support his conclusion and the fact the Siegel patent is not part of the rejection. Furthermore, the argument in lines 2-4 on page 5 of the declaration that he is unaware of any other methods of making the claimed particles is not supported by facts. As defined in the Rostoker patent, the Q value is inversely related to the Y and that patent clearly defines the Q values. The declaration defines that the units for the Q value is not dimensionless but rather 1/cm or 1 length. The examiner is unclear as to how Dr. Singh obtained these units and the declaration does not clearly show that the Q value is not dimensionless. The number or amount of particles having a certain size would be nm or a percentage of nm and not $1/cm^3$ (number of particles/volume of particles). The declaration continues to argue that the description (of the reference Q value) is inconsistent. Contrary to this statement, the description is clear as to how to obtain the Q values. The declaration also states that the Q value does not correspond to a Gaussian distribution. Although this may be the case, this value is the ratio of a number of particles having an average size divided by the number of particles having a size less than 50% of the average size (the value of Q is understood by the examiner and the Board or Patent Appeals and Interferences). The Q value is merely a quality factor and the fact that this value in not discloses in any books and is not a common method does not mean that it cannot be determined by one of ordinary skill in the art in reviewing the Rostoker patent. The declaration provides no sufficient evidence to support the statements made therein. The balance of the

declaration refers to references and rejections not made in this application. Finally, Dr. Singh is reminded that the patent number for Rostoker, as defined in the declaration is incorrect.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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2/06